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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,560	07/10/2001	Anders Hejlsberg	MS1-864US	6096
22801	7590	12/09/2003	EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/902,560	HEJLSBERG ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Neveen Abel-Jalil	2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 September 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-31 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                           | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 . | 6) <input type="checkbox"/> Other: _____ .                                    |

### **DETAILED ACTION**

1. The request for reconsideration filed on September 19, 2003 has been received and entered. Claims 1-31 are pending.

#### *Specification*

2. This application contains a computer program listing of over sixty (60) lines and less than three hundred-one (301) lines within the written specification. In accordance with 37 CFR 1.96(b), a computer program listing contained on over sixty (60) lines and less than three hundred-one (301) lines, must, if submitted as part of the specification, be positioned at the end of the specification and before the claims. Accordingly, applicant is required to cancel the computer program listing and either incorporate such listing in a compact disc in compliance with 37 CFR 1.96, or insert the computer program listing after the detailed description of the invention but before the claims, in the form of direct printouts from a computer's printer with dark solid black letters not less than 0.21 cm. high, on white, unshaded and unlined paper.

#### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. The claimed invention is directed to non-statutory subject matter.

Claims 1-13, and 22-31 are rejected under 35 U.S.C. 101 because none of the independent claims in conjunction with all dependent claims are statutory.

The claimed subject matter is directed to non-functional descriptive material. For example, claim 1 is a data structure (non-interactive) and is considered descriptive material per se. Claims 2-13 depend on non-statuatory independent claim 1 and are therefore non-statuatory.

Claims 22, 26, and 27 are method claims to a computer program (computer listing per se). Claims 23-25 depend on non-statuatory independent claim 22 and are therefore non-statuatory.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-13, and 22-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether the limitations of independent claims 1, 22, 26, 27, and 28 are program vs. function steps which render the claim(s) indefinite.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall

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have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 6-10, 12-23, and 25-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Balabine et al. (U.S. Patent No. 6,442,548 B1).

As to claims 1, 13-14, 21, and 22, Balabine et al. discloses an application program interface embodied on one or more computer readable media, a network software architecture comprising:

a first namespace related to data shared by a plurality of data providers (See column 3, lines 44-67);

a second namespace related to data used in an object-oriented database (See column 1, lines 42-52);

a third namespace related to data used by an SQL client (See column 2, lines 1-14); and

a fourth namespace related to native data types within an SQL server (See column 2, lines 15-48).

As to claim 2, Balabine et al. discloses wherein the SQL server is a Microsoft SQL Server (See column 8, lines 48-64, also see column 9, lines 38-65).

As to claim 3, Balabine et al. discloses wherein the first namespace includes a data adapter class to exchange data between a data source and a data set (See column 5, lines 5-22).

As to claim 6, Balabine et al. discloses wherein the first namespace includes a row update class to indicate when an update to a row is started (See column 6, lines 48-67, and see column 7, lines 1-12).

As to claim 7, Balabine et al. discloses wherein the first namespace includes a row update class to indicate when an update to a row is completed (See column 6, lines 5-65).

As to claim 8, Balabine et al. discloses wherein the second namespace includes a command builder class to automatically generate SQL statements for data table updates (See column 8, lines 3-47).

As to claim 10, Balabine et al. discloses wherein the third namespace includes a command builder class to automatically generate SQL statements for data table updates (See column 2, lines 51-62).

As to claim 9, Balabine et al. discloses wherein the second namespace includes a connection class to enable a connection to a data source (See column 6, lines 23-55).

As to claim 12, Balabine et al. discloses wherein the third namespace includes a data adapter class to exchange data between a data set and an SQL server for retrieving and saving data (See column 2, lines 1-45).

As to claim 15, Balabine et al. further comprising a constraint Class to maintain the integrity of data in a data table (See column 12, claim 16 language).

As to claim 16, Balabine et al. discloses further comprising a data column class to create a data table (See column 7, lines 13-50).

As to claim 17, Balabine et al. discloses further comprising a data column collection class to identify the type of data each data column in a data table can contain (See column 7, lines 13-50).

As to claim 18, Balabine et al. discloses further comprising a data relation class to relate two data table objects to each other (See column 4, lines 49-61).

As to claim 19, Balabine et al. discloses further comprising a data row collection class to identify data stored in a data table (See column 7, lines 13-50).

As to claim 20, Balabine et al. discloses further comprising a property collection class to add custom properties to a data table (See column 6, lines 40-65).

As to claim 23, Balabine et al. discloses wherein the common namespace includes:

a data adapter class to exchange data between a data source and a data set (See column 9, lines 9-37);

a data column mapping class to map column names from a data source to column names in a data table (See figure 9, also see column 7, lines 35-67);

a data table mapping class to map data returned from a query of a data source and a data table (See column 9, lines 55-65);

a row update class to indicate when an update to a row in a data table is completed (See column 6, lines 5-65).

As to claims 26, 27, and 28, Balabine et al. discloses a computer system including one or more microprocessors and one or more software programs, the one or more software programs utilizing a application program interface to request services from an operating system, the application program interface including separate commands to request services consisting of the following groups of service, a method for managing network and computing resources for a distributed computing system:

calling one or more first functions to facilitate sharing of data among multiple data providers (See column 3, lines 44-67);

calling one or more second functions to facilitate accessing object-oriented databases (See column 1, lines 42-52);

calling one or more third functions to facilitate SQL client operations, and SQL server (See column 2, lines 1-14);

calling one or more fourth functions to facilitate server operations (See column 6, lines 48-67, and see column 7, lines 1-12).

As to claim 25, Balabine et al. discloses wherein the SQL client namespace includes:

a command builder class to generate SQL statements for data table updates (See column 2, lines 51-67);

a connection class to represent a unique session to an SQL server data source

a data adapter class to exchange data between a data set and an SQL server for retrieving and saving data.

As to claim 29, Balabine et al. discloses wherein the first functions to comprise functions for exchanging data between a data source and a data set, mapping column names from a data source to column names in a data table, and indicating when an update to a row is completed (See column 6, lines 23-65, also see column 7, lines 1-50).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4, 5, 11, 24, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balabine et al. (U.S. Patent No. 6,442,548 B1) in view of Sarkar (U.S. Patent No. 6,418,448 B1).

As to claim 4, Balabine et al. does not teach wherein the first namespace includes a data column mapping class to map column names from a data source to column names in a data table.

Sarkar teaches wherein the first namespace includes a data column mapping class to map column names from a data source to column names in a data table (See Sarkar claims 1-3 language).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Balabine et al. to include wherein the first namespace includes a data column mapping class to map column names from a data source to column names in a data table.

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Balabine et al. by the teaching of Sarkar to include wherein the first namespace includes a data column mapping class to map column names from a data source to column names in a data table because it is well known in the database art since it allows for efficient and grouped access to data types.

As to claim 5, Balabine et al. does not teach wherein the first namespace includes a data table mapping class to map data returned from a query of a data source and a data table.

Sarkar teaches wherein the first namespace includes a data table mapping class to map data returned from a query of a data source and a data table (See Sarkar column 14, lines 48-67).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Balabine et al. to include wherein the first namespace includes a data table mapping class to map data returned from a query of a data source and a data table.

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Balabine et al. by the teaching of Sarkar to include wherein the first namespace includes a data table mapping class to map data returned from a query of a data source and a data table providing class function for mapping because it is well known in the database art since it allows for efficient and grouped access to data types.

As to claims 11, 30, and 31, Balabine et al. does not teach wherein the third namespace includes a connection class to represent a unique session to an SQL server data source.

Sarkar teaches wherein the third namespace includes a connection class to represent a unique session to an SQL server data source (See Sarkar column 7-33, also see Sarkar column 13, lines 36-45).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Balabine et al. to include wherein the third namespace includes a connection class to represent a unique session to an SQL server data source.

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Balabine et al. by the teaching of Sarkar to

include wherein the third namespace includes a connection class to represent a unique session to an SQL server data source because it provides for security and accuracy of the data.

As to claim 24, Balabine et al. discloses wherein the object-oriented namespace includes:

a connection class to enable a connection to a data source (See column 12, claims 14-16 language).

Balabine et al. does not teach a command builder class to generate SQL statements for data table updates.

Sarkar teaches a command builder class to generate SQL statements for data table updates (See Sarkar column 18, lines 25-35, and see Sarkar column 17, lines 1-20).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Balabine et al. to include a command builder class to generate SQL statements for data table updates.

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Balabine et al. by the teaching of Sarkar to include a command builder class to generate SQL statements for data table updates because providing a SQL command via builder provides for automation and dynamic database mapping and access.

*Response to Arguments*

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10. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Balabine et al. (U.S. Patent No. 5,937,406) teaches database interface.

Yee et al. (U.S. Patent No. 6,353,830 B1) teaches GUI for object relational query builder.

Krishnaprasad et al. (U.S. Pub. No. 2002/0099687 A1) teaches Mapping relational data and metadata to XML.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 703-305-8114. The examiner can normally be reached on 8:00AM-4: 30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Neveen Abel-Jalil  
November 29, 2003

*Charles Rones*  
**CHARLES RONES**  
**PRIMARY EXAMINER**